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Renumbered Claims

Amendments To The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-50 (canceled)

Claim ~~51~~ 1 (currently amended): A method for screening a small organic molecule for the ability to modulate heat shock protein receptor activity comprising:

(a) contacting heat shock protein receptor positive cells with the small organic molecule; and

(b) comparing the level of heat shock protein receptor binding activity in the heat shock protein receptor positive cells contacted with the small organic molecule to the amount of heat shock protein receptor binding activity in ~~the~~ such heat shock protein receptor positive cells not so contacted,

wherein an increase or decrease in the amount of heat shock protein receptor binding activity in the contacted heat shock protein receptor positive cells relative to the amount of heat shock protein receptor binding activity in the heat shock protein receptor positive cells not so contacted indicates that the small organic molecule has the ability to modulate heat shock protein receptor activity.

Claims 52 - 54: (canceled)

Claim ~~55~~ 2 (previously presented): The method of claim ~~51~~ 1 wherein the level of heat shock protein receptor binding activity is assayed by measuring the ability of the small organic molecule to bind to the heat shock protein receptor positive cells.

Claim ~~56~~ 4 (currently amended): A method for screening a molecule for the ability to modulate heat shock protein receptor activity comprising:

(a) contacting heat shock protein receptor positive cells with the molecule; and

(b) comparing the level of heat shock protein receptor binding activity in the heat shock protein receptor positive cells contacted with the molecule to the amount of heat shock protein receptor binding activity in ~~the~~ such heat shock protein receptor positive cells not so contacted,

wherein an increase or decrease in the amount of heat shock protein receptor binding activity in the contacted heat shock protein receptor positive cells relative to the amount of heat shock protein receptor binding activity in the heat shock protein receptor positive cells not so contacted indicates that the molecule has the ability to modulate heat shock protein receptor activity, wherein the level of heat shock protein receptor binding activity is assayed by measuring the ability of the molecule to modulate the binding of a heat shock protein or a heat shock protein-peptide complex to the cells.

Claim 5 (previously presented): The method of claim 1 or 4 wherein the heat shock protein receptor binding activity is the ability to interact with a heat shock protein receptor antibody.

Claim 8 (previously presented): The method of claim 4 wherein the molecule decreases the binding of the heat shock protein or the heat shock protein-peptide complex to the cells.

Claim 9 (previously presented): The method of any one of claims 4, 5 or 8 wherein the heat shock protein is an Hsp70, an Hsp 90, or gp96.

Claims 60 - 62 (canceled)

Claim 10 (previously presented): The method of claim 4 wherein the molecule is a peptide or protein, or derivative, analog or fragment thereof.

Claim 11 (previously presented): The method of claim 10 wherein the peptide is a member of a peptide library.

Claim 12 (previously amended): The method of claim 4 wherein the molecule is a small organic molecule, a nonpeptide, or an antibody.

Claim 13 (previously presented): The method of claim 12 wherein the nonpeptide is a member of a nonpeptide library.

Claim 14 (previously presented): The method of claim 1 or 12 wherein the small organic molecule is a member of a small molecule library.

Claim 3 (previously presented): The method of claim 1 wherein the small organic molecule is attached to a solid surface.

Claim ~~69~~ 15 (currently amended): A method for identifying a molecule potentially useful for the treatment of cancer comprising carrying out the method of claim ~~51 or 56~~ 1 or 4, further comprising the step of administering the molecule to a non-human animal having a tumor, and determining whether the molecule alters tumor progression in the non-human animal.

Claim ~~70~~ 18 (currently amended): A method for identifying a molecule potentially useful for the treatment of an infectious disease comprising carrying out the method of claim ~~51~~ 1 or ~~56~~ 4, further comprising the step of administering the molecule to a non-human animal infected with a pathogen, and determining whether the molecule ameliorates the infectious disease in the non-human animal.

Claim ~~71~~ 21 (currently amended): A method for identifying a molecule potentially useful for the treatment of an autoimmune disease comprising carrying out the method of claim ~~51~~ 1 or ~~56~~ 4, further comprising the step of administering the molecule to a non-human animal suffering from an autoimmune disease, and determining whether the molecule ameliorates the autoimmune disease in the non-human animal.

Claims 72 - 76: (canceled)

Claim ~~77~~ 6 (previously presented): The method of claim ~~51~~ 1 or ~~56~~ 4, wherein the heat shock protein receptor is selected from the group consisting of an Hsp70 receptor, an Hsp 90 receptor, and a gp96 receptor.

Claim ~~78~~ 7 (previously presented): The method of claim ~~51~~ 1 or ~~56~~ 4, wherein the heat shock protein receptor positive cells are purified from heat shock protein receptor negative cells.

Claim ~~79~~ 24 (currently amended): A method for screening a plurality of molecules for one or more molecules having the ability to modulate, directly or indirectly, the ability of heat shock protein receptor positive cells to stimulate the activation of cytotoxic T cells in vitro comprising:

(a) contacting said plurality of molecules with: (i) heat shock protein receptor positive cells; (ii) a purified complex of a heat shock protein and a peptide; and (iii) cytotoxic T cells, under conditions conducive to the activation of cytotoxic T cells; and

(b) comparing antigenic cell cytotoxicity of said T cells with the antigenic cell cytotoxicity of T cells contacted with said heat shock protein receptor positive cells and said purified complex under said conditions, but in the absence of said plurality of molecules,

wherein a lower or higher degree of cytotoxicity indicates that one or more molecules in said plurality of molecules modulates the ability of heat shock protein receptor positive cells to stimulate the activation of cytotoxic T cells against the peptide.

Claim ~~80~~ 25 (currently amended): A method for screening an antibody specific to a heat shock protein or specific to a heat shock protein receptor for the ability to modulate, directly or indirectly, the ability of heat shock protein receptor positive cells to stimulate the activation of cytotoxic T cells in vitro comprising:

(a) contacting the antibody with heat shock protein receptor positive cells and cytotoxic T cells under conditions conducive to the activation of cytotoxic T cells; and

(b) comparing antigenic cell cytotoxicity of said T cells with the antigenic cell cytotoxicity of T cells contacted with said heat shock protein receptor positive cells under said conditions, but in the absence of said antibody,

wherein a lower or higher degree of cytotoxicity indicates that the antibody modulates the ability of heat shock protein receptor positive cells to stimulate the activation of cytotoxic T cells against the antibody.

Claim ~~81~~ 26 (currently amended): A method for screening a molecule for the ability to modulate, directly or indirectly, the ability of heat shock protein receptor positive cells to stimulate the activation of cytotoxic T cells in vitro comprising:

(a) contacting the molecule with: (i) purified heat shock protein receptor positive cells; (ii) a purified complex of a heat shock protein and a peptide; and (iii) cytotoxic T cells, under conditions conducive to the activation of cytotoxic T cells; and

(b) comparing antigenic cell cytotoxicity of said T cells with the antigenic cell cytotoxicity of T cells contacted with said heat shock protein receptor positive cells and said purified complex under said conditions, but in the absence of said molecule,

wherein a lower or higher degree of cytotoxicity indicates that the molecule

modulates the ability of heat shock protein receptor positive cells to stimulate the activation of cytotoxic T cells against the peptide.

Claim 27 (currently amended): A method for screening a plurality of molecules for one or more molecules having the ability to modulate, directly or indirectly, antigen presentation activity of heat shock protein receptor positive cells comprising:

(a) contacting said plurality of molecules with heat shock protein receptor positive cells;

(b) measuring antigen presentation by said heat shock protein receptor positive cells in the presence of said plurality of molecules; and

(c) comparing antigen presentation activity by the heat shock protein receptor positive cells in the presence of said plurality of molecules with the antigen presentation activity by the heat shock protein receptor positive cellst in the absence of said plurality of molecules,

wherein a lower or higher degree of antigen presentation indicates that one or more ~~molecule(s)~~ molecules modulates the antigen presentation activity of the heat shock protein receptor positive cells.

Claim 32 (previously presented): A method for screening an antibody specific to a heat shock protein or a heat shock protein receptor for the ability to modulate, directly or indirectly, antigen presentation activity of heat shock protein receptor positive cells comprising:

(a) contacting an antibody specific to a heat shock protein or a heat shock protein receptor with heat shock protein receptor positive cells;

(b) measuring antigen presentation by said heat shock protein receptor positive cells in the presence of said antibody; and

(c) comparing antigen presentation activity by the heat shock protein receptor positive cells in the presence of the antibody with the antigen presentation activity by the heat shock protein receptor positive cells in the absence of the antibody,

wherein a lower or higher degree of antigen presentation indicates that the antibody modulates the antigen presentation activity of the heat shock protein receptor positive cells.

Claim 38 (previously presented): A method for screening a molecule for the ability to modulate, directly or indirectly, antigen presentation activity of heat shock protein receptor

positive cells comprising:

(a) contacting a molecule with: (i) a purified complex of a heat shock protein and a peptide; and (ii) purified heat shock protein receptor positive cells;

(b) measuring antigen presentation by said heat shock protein receptor positive cells in the presence of said molecule; and

(c) comparing the antigen presentation activity by the purified heat shock protein receptor positive cells in the presence of the molecule with the antigen presentation activity by purified heat shock protein receptor positive cells in the absence of the molecule,

wherein a lower or higher degree of antigen presentation indicates that the molecule modulates the antigen presentation activity of the heat shock protein receptor positive cells.

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Claim ~~85~~ (previously presented): The method of claim ~~82~~ 27, ~~83~~ 32, or ~~84~~ 38, wherein measuring antigen presentation is carried out by measuring representation of a peptide by an MHC molecule.

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Claim ~~86~~ (previously presented): The method of claim ~~81~~ 26 or ~~84~~ 38, wherein the molecule is a peptide or protein, or derivative, analog or fragment thereof.

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Claim ~~87~~ (previously presented): The method of claim ~~81~~ 26 or ~~84~~ 38, wherein the molecule is a small organic molecule or a nonpeptide.

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Claim ~~88~~ (previously presented): The method of claim ~~87~~ 46, wherein the nonpeptide is a member of a nonpeptide library.

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Claim ~~89~~ (previously presented): The method of claim ~~87~~ 46, wherein the small organic molecule is a member of a small molecule library.

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Claim ~~90~~ (previously presented): The method of claim ~~81~~ 26 or ~~84~~ 38, wherein the molecule is attached to a solid surface.

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Claim ~~91~~ (previously presented): The method of claim ~~80~~ 25 or ~~85~~ 32, wherein the antibody is attached to a solid surface.

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Claim ~~92~~ (previously presented): The method of claim ~~79~~ 24, ~~80~~ 25, ~~81~~ 26, ~~82~~ 27, ~~83~~ 32, or ~~84~~ 38, wherein the heat shock protein receptor positive cells are macrophage or dendritic cells.

Claim ~~93~~ 49 (currently amended): A method for identifying a molecule potentially useful for the treatment of cancer comprising carrying out the method of claim ~~79, 81, 82~~ 24, 26, 27, or ~~84~~ 38, further comprising the step of administering the molecule to a non-human animal having a tumor, and determining whether the molecule alters tumor progression in the non-human animal.

Claim ~~94~~ 35 (currently amended): A method for identifying an antibody potentially useful for the treatment of cancer comprising carrying out the method of claim ~~80~~ 25 or ~~83~~ 32, further comprising the step of administering the antibody to a non-human animal having a tumor, and determining whether the antibody alters tumor progression in the non-human animal.

Claim ~~95~~ 50 (currently amended): A method for identifying a molecule potentially useful for the treatment of an infectious disease comprising carrying out the method of claim ~~79, 81, 82~~ 24, 26, 27, or ~~84~~ 38, further comprising the step of administering the molecule to a non-human animal infected with a pathogen, and determining whether the molecule ameliorates the infectious disease in the non-human animal.

Claim ~~96~~ 36 (currently amended): A method for identifying an antibody potentially useful for the treatment of an infectious disease comprising carrying out the method of claim ~~80~~ 25 or ~~83~~ 32, further comprising the step of administering the antibody to a non-human animal infected with a pathogen, and determining whether the antibody ameliorates the infectious disease in the non-human animal.

Claim ~~97~~ 51 (currently amended): A method for identifying a molecule potentially useful for the treatment of an autoimmune disease comprising carrying out the method of claim ~~79, 81, 82~~ 24, 26, 27, or ~~84~~ 38, further comprising the step of administering the molecule to a non-human animal suffering from an autoimmune disease, and determining whether the molecule ameliorates the autoimmune disease in the non-human animal.

Claim ~~98~~ 37 (currently amended): A method for identifying an antibody potentially useful for the treatment of an autoimmune disease comprising carrying out the method of claim ~~80~~ 25 or ~~83~~ 32, further comprising the step of administering the antibody to a non-human animal suffering from an autoimmune disease, and determining whether the antibody ameliorates the autoimmune disease in the non-human animal.

Claim ~~99~~ 43 (previously presented): The method of claim ~~79, 80, 81, 82, 83,~~ or ~~84,~~ 24 25 26 27 32 38 wherein the heat shock protein receptor is selected from the group consisting of an Hsp70 receptor, an Hsp 90 receptor, and a gp96 receptor.

Claim ~~100~~ 44 (previously presented): The method of claim ~~79, 80, 81, 82, 83,~~ or ~~84,~~ 24 25 26 27 32 38 wherein the heat shock protein receptor positive cells are purified from heat shock protein receptor negative cells.

Claim ~~101~~ 45 (previously amended): The method of claim ~~81~~ or ~~84,~~ 26 38 wherein the molecule is purified.

Claim ~~102~~ 34 (previously presented): The method of claim ~~80~~ or ~~83,~~ 25 32 wherein the antibody is purified.

Claim ~~103~~ 52 (previously amended): A method for screening a peptide library for the ability to modulate heat shock protein receptor activity comprising:

(a) contacting heat shock protein receptor positive cells with a member of a peptide library; and

(b) comparing the level of heat shock protein receptor binding activity in the heat shock protein receptor positive cells contacted with the member of the peptide library to the amount of heat shock protein receptor binding activity in the heat shock protein receptor positive cells not so contacted,

wherein an increase or decrease in the amount of heat shock protein receptor binding activity in the contacted heat shock protein receptor positive cells relative to the amount of heat shock protein receptor binding activity in the heat shock protein receptor positive cells not so contacted indicates that the member of the peptide library has the ability to modulate heat shock protein receptor activity.

Claim ~~104~~ 53 (previously presented): The method of claim ~~103~~ 52 wherein the level of heat shock protein receptor binding activity is assayed by measuring the ability of the member of the peptide library to bind to the heat shock protein receptor positive cells.

Claim ~~105~~ 54 (previously presented): The method of claim ~~103~~ 52 wherein the heat shock protein receptor binding activity is the ability to interact with a heat shock protein receptor antibody.

Claim ~~106~~ 55 (previously presented): The method of claim ~~103~~ 52 wherein the member of the peptide library is attached to a solid surface.

Claim ~~107~~ 58 (currently amended): A method for identifying a molecule potentially useful for the treatment of cancer comprising carrying out the method of claim ~~103~~ 52, further comprising the step of administering the member of the peptide library to a non-human animal having a tumor, and determining whether the molecule alters tumor progression in the non-human animal.

Claim ~~108~~ 59 (currently amended): A method for identifying a molecule potentially useful for the treatment of an infectious disease comprising carrying out the method of claim ~~103~~ 52, further comprising the step of administering the member of the peptide library to a non-human animal infected with a pathogen, and determining whether the molecule ameliorates the infectious disease in the non-human animal.

Claim ~~109~~ 60 (currently amended): A method for identifying a molecule potentially useful for the treatment of an autoimmune disease comprising carrying out the method of claim ~~103~~ 52, further comprising the step of administering the molecule to a non-human animal suffering from an autoimmune disease, and determining whether the molecule ameliorates the autoimmune disease in the non-human animal.

Claim ~~110~~ 56 (previously presented): The method of claim ~~103~~ 52, wherein the heat shock protein receptor is selected from the group consisting of an Hsp70 receptor, an Hsp 90 receptor, and a gp96 receptor.

Claim ~~111~~ 57 (previously presented): The method of claim ~~103~~ 52, wherein the heat shock protein receptor positive cells are purified from heat shock protein receptor negative cells.

Claim ~~112~~ 28 (previously presented): The method of claims ~~79~~ 24 or ~~82~~ 27, wherein the molecules are peptides or proteins, or derivatives, analogs or fragments thereof.

Claim ~~113~~ 29 (previously presented): The method of claim ~~79~~ 24 or ~~82~~ 27, wherein the molecules are a small organic molecules or a nonpeptides.

Claim ~~114~~ 30 (previously presented): The method of claim ~~79~~ 24 or ~~82~~ 27, wherein the molecules are attached to a solid surface.

Claim ~~115~~ 31 (previously presented): The method of claim ~~79~~ 24 or ~~82~~ 27, wherein the molecules are purified.

Claim ~~116~~ 16 (previously presented): The method of claim ~~69~~ 15, wherein the heat shock protein receptor is selected from the group consisting of an Hsp70 receptor, an Hsp 90 receptor, and a gp96 receptor.

Claim ~~117~~ 19 (previously presented): The method of claim ~~70~~ 18, wherein the heat shock protein receptor is selected from the group consisting of an Hsp70 receptor, an Hsp 90 receptor, and a gp96 receptor.

Claim ~~118~~ 22 (previously presented): The method of claim ~~71~~ 21, wherein the heat shock protein receptor is selected from the group consisting of an Hsp70 receptor, an Hsp 90 receptor, and a gp96 receptor.

Claim ~~119~~ 17 (previously presented): The method of claim ~~69~~ 15, wherein the heat shock protein receptor positive cells are purified from heat shock protein receptor negative cells.

Claim ~~120~~ 20 (previously presented): The method of claim ~~70~~ 18, wherein the heat shock protein receptor positive cells are purified from heat shock protein receptor negative cells.

Claim ~~121~~ 23 (previously presented): The method of claim ~~71~~ 21, wherein the heat shock protein receptor positive cells are purified from heat shock protein receptor negative cells.